

LCD/LCOS Projectors

Safety Manual

Barco nv Simulation Products
600 Bellbrook Ave, Xenia OH 45385
Phone: +1 (937) 372 7579
Fax: +1 (937) 372 8645
E-mail: eis@barco.com
Visit us at the web: www.eis.barco.com

Barco nv Simulation Products
Noordlaan 5, B-8520 Kurne
Phone: +32 56.36.82.11
Fax: +32 56.36.84.86
E-mail: info@barco.com
Visit us at the web: www.barco.com

1. SAFETY INSTRUCTIONS

1.1 General

Notice on Safety

This equipment is built in accordance with the requirements of the international safety standards IEC60950-1, EN60950-1, UL60950-1 and CAN/CSA - C22.2 No.60950-1, which are the safety standards of information technology equipment including electrical business equipment. These safety standards impose important requirements on the use of safety critical components, materials and isolation, in order to protect the user or operator against risk of electric shock and energy hazard, and having access to live parts. Safety standards also impose limits to the internal and external temperature rises, radiation levels, mechanical stability and strength, enclosure construction and protection against the risk of fire. Simulated single fault condition testing ensures the safety of the equipment to the user even when the equipment's normal operation fails.

Installation Instructions

- Before operating this equipment please read this manual thoroughly, and retain it for future reference.
- Installation and preliminary adjustments should be performed by qualified BARCO personnel or by authorized BARCO service dealers.
- All warnings on the projector and in the documentation manuals should be adhered to.
- All instructions for operating and use of this equipment must be followed precisely.

Owner's Record

The part number and serial number are located at the back side of the projector. Record these numbers in the spaces provided below. Refer to them whenever you call upon your BARCO dealer regarding this product.

Part Number:	
Ser. Number:	
Dealer:	

Safety Warning

TO PREVENT FIRE OR ELECTRICAL SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE !

Safety warnings

- This product should be operated from an AC power source. Power input is auto-ranging from 90 V to 254V.
- All equipment in the system is equipped with a 3-wire grounding plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
- Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating.
- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock.
- Never spill liquid of any kind on the product. Should any liquid or solid object fall into the cabinet, unplug the set and have it checked by qualified service personnel before resuming operations.
- Lightning - For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the projector due to lightning and AC power-line surges.



WARNING: This apparatus must be grounded (earthed) via the supplied 3 conductor AC power cable. If the supplied power cable is not the correct one, consult your dealer.

Plug types

- a. Mains lead (AC Power cord) with CEE 7 plug up to 16 A

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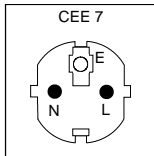


Image 1-1

The colors of the mains lead are colored in accordance with the following code:

Green-and-yellow: Earth (safety earth)

Blue: Neutral

Brown: Line

b. Power cord with NEMA 5/15 plug up to 15 A

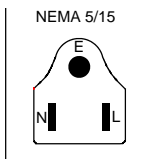


Image 1-2

The wires of the power cord are colored in accordance with the following code.

Green/yellow: ground

White: neutral

Black: line (live)

c. Power cord with EN60309 plug

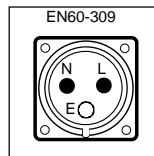


Image 1-3

The wires of the power cord are colored in accordance with the following code.

International plug 32A

North American plug 30A

Green/yellow: ground

Green/yellow: ground

Blue: neutral

White : neutral

Brown: line (live)

Black: line (live)

Heat and Fire Hazard

DO NOT PLACE FLAMMABLE OR COMBUSTIBLE MATERIALS NEAR THE PROJECTOR !

To reduce the lamp heat of the projector, switch the projector first to standby and let the projector lamp cool down for at least 5 minutes. Then the projector may be switched off with the power switch.

Warning Risk of Fire: Do Not Place Flammable or Combustible Materials Near Projector !

BARCO large screen projection products are designed and manufactured to meet the most stringent safety regulations.

This projector radiates heat on its external surfaces and from ventilation ducts during normal operation, which is both normal and safe. Exposing flammable or combustible materials into close proximity of this projector could result in the spontaneous ignition of that material, resulting in a fire. For this reason, it is absolutely necessary to leave an "exclusion zone" around all external surfaces of the projector whereby no flammable or combustible materials are present. The exclusion zone must be not less than 40 cm (16") for all BARCO projectors. The exclusion zone on the lens side must be at least 2 m. Do not cover the projector or the lens with any material while the projector is in operation.

Keep flammable and combustible materials away from the projector at all times.

Mount the projector in a well ventilated area away from sources of ignition and out of direct sun light.

Never expose the projector to rain or moisture.

In the event of fire, use sand, CO₂, or dry powder fire extinguishers; never use water on an electrical fire.

Always have service performed on this projector by authorized BARCO service personnel.

Always insist on original BARCO replacement parts. Never use non-BARCO replacement parts as they may degrade the safety of this projector.

Slots and openings in the cabinet and the sides are provided for ventilation; to ensure reliable operation of the projector and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface.

This product should never be placed near or over a radiator or heat register.

This projector should not be placed in a built-in installation or enclosure unless proper ventilation is provided.

Projection rooms must be well ventilated or cooled in order to avoid build up of heat.

Safety On Installation

- Do not place this equipment on an unstable cart, stand, or table. The product may fall, causing serious damage to it.
- Do not use this equipment near water.
- Use only the power cord supplied with your projector. While appearing to be similar, other power cords have not been safety tested at the factory and may not be used to power the projector. For a replacement power cord, contact your dealer.
- Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. The projector should not be placed in a built-in installation or enclosure unless proper ventilation is provided.
- Do not block the projector cooling fans or free air movement under and around the projector. Loose papers or other objects may not be nearer to the projector than 4" on any side.
- Consult a professional structural engineer prior to suspending the ceiling mount from a structure not intended for that use. Always ensure the working load limit of the structure supporting the projector.
- When mounting the projector to the ceiling or to a rigging system, always mount security chains.

To prevent personal injury

Caution : High pressure lamp may explode if improperly handled. Refer servicing to qualified service personnel. The customer should never attempt to disassemble the lamp casing or to dispose of the lamp casing other than by returning it to BARCO.

To prevent injuries and physical damage, always read this manual and all labels on the system before inserting the lamp casing or connecting to the wall outlet, adjusting the projector.

To prevent injuries, take note of the weight of the projector.

Warning : high intensity light beam. NEVER look into the lens ! Due to the high luminance damage to the eye can happen.

Before attempting to remove any of the projector's covers, you must turn off the projector and disconnect from the wall outlet.

When performing set up work at a ceiling mounted projector, to prevent injury caused by falling objects or the system, set out a keep out area.

To prevent projector damage

If the Air Filters are not regularly replaced, the air flow inside the projector could be disrupted, causing overheating. Overheating may lead to the projector shutting down during operation.

In order to ensure that correct airflow is maintained, and that the projector complies with Electro-Magnetic Compatibility requirements, it should always be operated with all of it's covers in place.

Ensure that nothing can be spilled on, or dropped inside the projector. If this does happen, switch off and unplug the mains supply immediately. Do not operate the projector again until it has been checked by qualified service personnel.

The projector must always be mounted in a manner which ensures free flow of air into its air inlets and unimpeded evacuation of the hot air exhausted from its cooling system. Heat sensitive materials should not be placed in the path of the exhausted air.

Special Care for Laser Beams

Special care should be used when projectors are used in the same room as high power laser equipment. Direct or indirect hitting of a laser beam on to the lens can severely damage to the optical engines in which case there is a loss of warranty

Environment condition check

A projector must always be mounted in a manner which ensures the free flow of clean air into the projectors ventilation inlets. For installations in environments where the projector is subject to airborne contaminants such as that produced by smoke machines or similar (these deposit a thin layer of greasy residue upon the projectors internal optics and imaging electronic surfaces, degrading performance), then it is highly advisable and desirable to have this contamination removed prior to it reaching the projectors clean air supply. Devices or structures to extract or shield contaminated air well away from the projector are a prerequisite, if this is not a feasible solution then measures to relocate the projector to a clean air environment should be considered.

Only ever use the manufactures recommended cleaning kit which has been specifically designed for cleaning optical parts, never use industrial strength cleaners on a projectors optics as these will degrade optical coatings and damage sensitive optoelectronics components. Failure to take suitable precautions to protect the projector from the effects of persistent and prolonged air contaminants will culminate in extensive and irreversible ingrained optical damage. At this stage cleaning of the internal optical units will be

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non-effective and impracticable. Damage of this nature is under no circumstances covered under the manufactures warranty and may deem the warranty null and void. In such a case the client shall be held solely responsible for all costs incurred during any repair. It is the clients responsibility to ensure at all times that the projector is protected from the harmful effects of hostile airborne particles in the environment of the projector. The manufacture reserves the right to refuse repair if a projector has been subject to wantful neglect, abandon or improper use.

Safety On Servicing

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage potentials and risk of electric shock!

Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power cord or plug is damaged or frayed.
- If liquid has been spilled into the equipment.
- If the product has been exposed to rain or water.
- If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of the other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
- If the product has been dropped or the cabinet has been damaged.
- If the product exhibits a distinct change in performance, indicating a need for service.
- Replacement parts: When replacement parts are required, be sure the service technician has used original BARCO replacement parts or authorized replacement parts which have the same characteristics as the BARCO original part. Unauthorized substitutions may result in degraded performance and reliability, fire, electric shock or other hazards. Unauthorized substitutions may void warranty.
- Safety check: Upon completion of any service or repairs to this projector, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Safety On Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

To keep the cabinet looking brand-new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with mild detergent solution. Never use strong solvents, such as thinner or benzine, or abrasive cleaners, since these will damage the cabinet.

To ensure the highest optical performance and resolution, the projection lenses are specially treated with an anti-reflective coating, therefore, avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinner.

On Repacking

Save the original shipping carton and packing material; they will come in handy if you ever have to ship your equipment. For maximum protection, repack your set as it was originally packed at the factory.

On Illumination

In order to obtain the best quality for the projected image, it is essential that the ambient light which is allowed to fall on the screen be kept to an absolute minimum.

When installing the projector and screen, care must be taken to avoid exposure to ambient light directly on the screen. Avoid adverse illumination on the screen from direct sunlight or fluorescent lighting fixtures.

The use of controlled ambient lighting, such as incandescent spot light or a dimmer, is recommended for proper room illumination. Where possible, care should also be taken to ensure that the floors and walls of the room in which the projector is to be installed are non-reflecting, dark surfaces. Brighter surfaces will tend to reflect and diffuse the ambient light and hence reduce the contrast of the projected image on the screen.